Amendments to the Claims:

1. (original) A method of cleaning a hole formed in an organic inter-level dielectric (ILD), the hole having sidewalls and a bottom, the organic ILD disposed on a semiconductor substrate, the method comprising:

performing a radio frequency (RF) sputter clean of the hole; and

performing an anisotropic, ion enhanced organic etch of the hole at least partially during the sputter clean,

whereby organic material displaced from the sidewalls to the bottom of the hole by the sputter clean is removed by the anisotropic organic etch.

2. (original) The method of claim 1, wherein the organic etch comprises a nitrogen plasma.

3. (original) The method of claim 1, wherein the RF sputter clean comprises an argon plasma.

4. (original) The method of claim 1, wherein the RF sputter clean comprises a helium plasma.

5. (canceled)

6. (original) The method of claim 5, wherein the plasma is a nitrogen plasma.

7. (original) The method of claim 1, wherein organic etch is ion enhanced with an RF bias of between about 0 watts and about 500 watts.

8. (original) The method of claim 1, wherein the RF sputter clean and the organic etch are performed over about the same time interval.

9. (original) The method of claim 1, wherein the hole is part of an interconnect structure, wherein a conductive layer is disposed at a bottom of the hole, and wherein the RF sputter clean removes a surface oxide formed on the conductive layer.

10. (original) A method of cleaning an interconnect structure formed in an organic ILD, the structure comprising a hole having a bottom and sidewalls, the structure disposed on a semiconductor substrate, the method comprising:

forming a plasma over the interconnect structure, the plasma comprising a physical etch component and an ion enhanced chemical etch component;

directing the plasma toward the interconnect structure;

sputter cleaning the bottom of the hole with the physical etch component; and

anisotropically removing organic material from the bottom of the hole with the chemical etch component.

11. (original) The method of claim 10, wherein the chemical etch component comprises nitrogen.

12. (original) The method of claim 10, wherein the physical etch component comprises argon.

13. (original) The method of claim 10, wherein the physical etch component comprises helium.

14. (canceled)

15. (original) The method of claim 10, wherein the chemical etch is ion enhanced with an RF bias of between about 0 watts and about 500 watts.

16. (original) A method of forming an interconnect through an organic ILD, the method comprising:

forming a lower conductive layer on a semiconductor substrate;

forming the organic ILD on the lower conductive layer;

etching a hole through the organic ILD down to the lower conductive layer;

performing an RF sputter clean of a bottom of the hole;

performing an anisotropic, ion enhanced chemical organic etch of the hole, wherein the etch is performed at least partially during the RF sputter clean;

forming a plug in the hole; and

forming an upper conductive layer on the organic ILD and the plug.

17. (original) The method of claim 16, wherein said RF sputter clean comprises using an argon plasma.

18. (original) The method of claim 16, wherein said RF sputter clean comprises using a helium plasma.

19. (original) The method of claim 16, wherein said organic etch comprises using a nitrogen plasma.

20. (canceled)

21. (original) The method of claim 20, wherein the plasma is a nitrogen plasma.

22. (original) The method of claim 16, further comprising:

forming a lower cap layer on the lower conductive layer before the forming of the organic ILD layer; and

forming an upper cap layer on the organic ILD layer,

wherein the etching of the hole further comprises etching through the upper cap layer and lower cap layer.

23. (original) The method of claim 16, further comprising forming a liner in the hole before the forming of the plug.